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Only the Lonely? The Influence of the Spouse on the Transition to Self-Employment*

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Abstract: Previous research showed that married individuals are overrepresented among the self-employed. Few studies proposed skill-spillover between the spouses within the marriage as an explanation. This paper deviates from the previous research by exploring different relationship contexts (e.g. cohabitation, being married or divorced, a widow(er) or single) and the role of partner influences under these contexts. It argues that the interaction between gender and relationship status implies variation in not only resources but also constraints, and hence sorts individuals into two different types of self-employment: entrepreneurial self-employment (i.e. incorporated business) and unincorporated self-employment. Using "Panel Study of Income Dynamics (PSID) 1965-2005" data, results of the competing risk models show that marital status contributes to both types of self-employment transitions, especially for men, but also for women. Cohabitation is a less supportive context for entrepreneurship and a partner's self-employment experience increases only women's likelihood of entering into entrepreneurship. These results suggest that skill-spillover between partners might be context dependent and only in one direction (from men to women).

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1. Introduction

Self-employment is an important research phenomenon for social scientists. Economists have long investigated its role in economic growth and productivity (e.g. Baumol, 1968; Blanchflower, 2000). Researchers studying organizations have drawn attention to the adaptive, reproductive and destructive consequences of self-employment for organizational routines, structure and order (e.g. Haveman & Cohen, 1994). Sociologists have seen self-employment as a critical source of stratification, a potential threat to earnings equality and a vehicle of social mobility (e.g. Sorensen, 1977).

Although self-employment has been receiving increasing attention from scholars, much of the research has treated entrepreneurs as "lonely only" individuals (Schoonoven & Romanelli, 2001). Such research has typically made strong assumptions about the exogeneity of external influences on the decision to become self-employed (Carroll & Mosakowski, 1987; Thorntorn, 1999). Major theoretical arguments have, for the most part, attributed the decision to a wide range of personality traits, motivational attributes (e.g. Ozcan & Reichstein, 2009) and socio-cultural backgrounds (e.g. Aldrich & Waldinger, 1990; Nee & Sanders, 1996). In most profound accounts, transition to self-employment is seen as a function of individual desire to master the challenges of founding a new organization and to have control over one's productivity (e.g. McClelland, 1978; Zhao & Seibert, 2006).

Recent studies have moved away from micro-behavioral foundations. There are, of course, extensive differences in their formulations of how, why, when and where entrepreneurial behavior arises. Yet, these studies are alike in their insistence that entrepreneurship is an interactive process between the individual and the environment and that situational factors foster or impede the self-employment process beyond factors which can be explained by individual characteristics. Along these lines, socio-economic contextual units, such as organization (Ruef, Aldrich & Carter, 2003), industry (Carroll & Mayer, 1986; Bates, 1995) and regions (Sorenson & Audia, 2000) have become domains of repeated inquiry.

Recent scholarship has increasingly pointed to the family as the primary social organization shaping self-employment decisions (Sanders & Nee, 1996). However, the family's influence on self-employment decisions has been explored mostly through the mechanisms of inter-generational transmission, explicating the role of parental influences (e.g. Aldrich *et al*., 1998; Dunn & Holtz-Eakin, 2000; Hout & Rosen, 2000; Renzulli, Aldrich & Moody, 2000; Sorensen, 2007). Yet, only few studies focused on the spousal influences, most of which work with narrowly selected samples, examining only married couples (e.g. Caputo and Dolinsky, 1998; Bruce, 1999; Parker, 2008; Budig, 2006[1]) or immigrant families (e.g. Borjas, 1986; Nee & Sanders, 1996).

This is regrettable, as major demographic transformations in the past three decades have radically altered the marriage and career dynamics of individuals in the U.S. Transformations, such as the decline of co-residence in inter-generational households (White, 1994), sharp rise in the cohabitation rate (Smock, 2000), high marital instability and delay in age at first marriage (Stevenson and Wolfers, 2007) and an increase in married women's labor force participation (Blau and Kahn, 2006) could redefine the role of *the family* for self-employment behavior. First, these dynamics imply a change in the relative importance of partners' influence on "the couple's" labor market decisions. Second, they alter the distribution of resources and disadvantages relevant to self-employment transitions across households. Given these changes, analyzing the family's role in self-employment behavior requires an expansion of the research focus to include spousal influences, heterogeneous households and relationship types.

Therefore, this paper examines the smallest micro-unit of the socio-economic environment, focusing on how marriage and relationship status provide the context in which self-employment decisions unfold. First, it examines whether marriage and relationship status

[1] Budig (2006) also focuses only on the married couples although, unlike others, her sample includes "not married" individuals as well.

influence self-employment transitions. Then, it asks whether having a partner with specific characteristics makes these transitions more likely.

Three additional observations motivated this research: First and foremost, the relationship between marital status and self-employment has been only very crudely analyzed in the empirical literature, although evidence from the cross-sectional data repeatedly shows that the married are overrepresented among the self-employed (Blanchflower & Meyer, 1994; Bruce, 1999; Blanchflower, 2007). Marriage is often considered as a binary control variable. Even the most elaborate analyses completely ignore its contextual difference from cohabitation (Budig, 2006; Parker, 2008; Brown, *et al*., 2006). Moreover, the reference category "singles" in this binary setting is also problematic because it uncritically pools never-married individuals, the divorced, the widowed, and even those that are cohabiting with a partner in this category (e.g. Budig, 2006; Parker, 2008; Brown, *et al*., 2006; Caputo and Dolinsky, 1998; Taniguchi, 2002).

Second, the studies that explore family processes have largely ignored the heterogeneity of the self-employed. They either focus solely on incorporated business owners as entrepreneurs (e.g. Parker, 2008) or do not make any distinction between the various types of self-employment (e.g. Carr, 1996; Caputo and Dolinsky, 1998; Taniguchi, 2002; Bruce, 1999; Brown *et al*., 2006). However, recent research points to an increasing bimodality in self-employment types by gender (e.g. Arum, 2004; Budig, 2006). These studies suggest that men and women have very different motivations for becoming self-employed and are subject to different constraints, all of which frequently sorts women into "less-rewarding" types of self-employment than men (Budig, 2006).

Finally, I was concerned about the methodological shortcomings and narrow focus of the few studies that do explore marriage as a context. First, they focus solely on women's transition to self employment (Taniguchi, 2002) and on how husbands impact it, rather than on the mutual influences of both partners on each other (e.g. Devine, 1994; Caputo &

Dolinsky, 1998; Bruce, 1999; Budig, 2006)[2]. Furthermore, they typically use cross-sectional samples (e.g. Nee & Sanders, 1996; Brown *et al*., 2006) with simple linear probability models that do not account for the endogeneity that emerges when individuals are selected into self-employment and marriage simultaneously (e.g. Borjas, 1986; Renzulli *et al*., 2000). Estimates on the cross-sectional data also confound the effects on entry and on survival in self-employment. Finally, the absence of pre-marital work history and "left-censoring" due to exclusion of previous self-employment experience (e.g. Arum, 2004), are examples of other sampling problems in this research vein.

This study attempts to address many of these theoretical and methodological issues. First, I take into account a broader range of relationship arrangements, such as marriage, cohabitation and being divorced or widowed and how they differ from never being married. Second, I consider not only transitions to incorporated self-employment (i.e. entrepreneurs), but also entry into unincorporated self–employment. While doing so, I analyze men and women separately, taking into account the differences in mechanisms and mutual influences of both partners instead of focusing only on the women. Using the "Panel Study of Income Dynamics" (PSID) data from the U.S., I construct career and marriage histories of individuals who entered the labor market for the first time between 1968 and 2005 to avoid left-censoring. Then I apply a competing-risk model to estimate the likelihood of entry into two different types of self-employment. I show that gender differences in entrepreneurial migration are significantly larger if the destination is starting an incorporated business rather than an unincorporated business.

The paper is organized as follows: In the next section, I will introduce the background theory on how relationship status can affect the decision to become self-employed. Section 3 will describe the data, sampling and modeling strategy. Section 4 will present the results. The study ends with conclusions and discussions.

[2] See for exceptions Parker (2008) and Arum (2004).

2. Theoretical Background and Literature

A growing number of studies claim that partners influence an individual's labor market behavior and more importantly, labor market outcomes in general (e.g. Bernasco, 1994; Bernasco *et al*., 1998; Bernardi, 1999; Blossfeld & Drobnic, 2001; Verbakel & de Graaf, 2008; Verbakel & de Graaf, 2009). Their theoretical arguments usually build on the synthesis of two hypotheses: The first is the specialization hypothesis of the standard neo-classical theory of the family (e.g. Becker, 1991), while the other relies upon a more sociological concept: *social capital* (e.g. Coleman, 1990).

The specialization hypothesis suggests that since spouses differ in their productivity levels, they can maximize a joint utility function efficiently by specializing in either market work or domestic work, according to their relative productivity. The relevant implication of this hypothesis is that human capital is only accumulated through experience and training (usually on the job), and that it is one of the main determinants of productivity. Thus, this hypothesis implies that the spouse who specializes in domestic work (or who has a comparative disadvantage in the market work) will put less effort into market work after marriage. Consequently, s/he will accumulate less human capital and end up with poorer labor market outcomes. On the other hand, the spouse who focuses on market work will have better labor market outcomes after marriage. In a nutshell, the division of labor and specialization hypothesis predicts that marriage will have a *negative effect* on one of the spouse's labor market outcomes and *a positive effect* on the other.

On the other hand, the social capital perspective predicts that spouses and marriage have *a positive effect* on both partners' labor market achievements. Spouses improve each other's resources through the provision of additional skills, knowledge, and networks[3]. For example, one spouse may use his or her contacts to help the other. Having a working partner

[3] The underlying assumptions about why an individual would share these resources with a spouse are based on Coleman's (1990) "trust" concept and explained in detail in Bernasco (1994) and Bernasco *et al.* (1998).

links the other partner with the labor market and the working partner's network. In addition, partners can be direct sources of skill, transferring knowledge, experiential learning, and motivation (Caputo & Dolinsky, 1998; Davis & Aldrich, 2000; Taniguchi, 2002; Parker, 2008). Additionally, couples spend more time with each other and less time with known others like family members. It has been shown, for instance, that, in general, spouses are the most frequently named discussion partners for important problems (Marsden, 1987; Liao and Stevens, 1994). Through such interaction spouses provide both direct transfers of knowledge and access to new knowledge. For instance, spouses can transmit occupational experiences, assist in writing application letters and help prepare for work-related exams, job interviews, or simply provide information about job opportunities (Bernardi, 1999).

A number of studies incorporating these two views, analyzed "spousal effects" for various labor market outcomes like labor force participation (e.g. Bernardi, 1999; Blossfeld & Drobnic, 2001), occupational status (e.g. Bernasco, 1994; Bernasco *et al*., 1998), career mobility (Verbakel & de Graaf, 2008), and job level (Verbakel & de Graaf, 2009).

In fact, not only these outcome variables, but also self-employment decisions are affected by partners. First, the decision to become self-employed is often embedded in a decision to enter the labor market. If self-employment means taking control of one's own productivity and labor supply, then the aforementioned spousal effects upon labor market entry might also influence the choice of employment type. Second, the hypothesis about self-employment being a vehicle for class mobility implies that individuals in bad jobs become self-employed when they have enough resources to improve their economic conditions and achieve greater levels of occupational success (Sorensen, 1977; Budig, 2006)[4]. If self-employment provides an alternative means of achieving occupational success and mobility,

[4] For this reason, studies on immigrant self-employment argue that immigrants prefer self-employment as an alternative means of achieving occupational success because their human capital is usually undervalued by employers in the host countries (Borjas, 1986; Nee & Sanders, 1996).

then the spousal resources influencing occupational attainment or career mobility may also encourage entry into self-employment.

2.1. Marriage and Self-Employment

The predictions of the two hypotheses explained before can therefore be adapted to self-employment behavior. If the specialization and economic exchange hypotheses hold true, marriage would imply *a negative effect* on the likelihood of self-employment for a spouse specializing in domestic work. However, if the social capital perspective holds true, then marriage (i.e. the presence of a partner) will imply *a positive effect* on the likelihood of both partners becoming self-employed.

Although the specialization hypothesis may seem gender-neutral (i.e. either partner may specialize in domestic work); its predictions for men and women are very different because, by and large, women still do a larger share of domestic work and child care in most post-industrial societies, including the U.S. (see the literature in Blossfeld and Drobnic, 2001). Since women specialize in non-market work more often than men, the combined implications of the two hypotheses provide ambiguous predictions of marriage's impact on *women's* self-employment transitions.

However, the key factor is the type of self-employment. The negative effect of marriage on self-employment migration (according to the specialization and economic exchange hypotheses) may only be true if self-employment is a vehicle of career progress. Yet, not all types of self-employment can be seen as career-advancing. In fact, recent studies have argued that women are more prevalent in "unincorporated and non-professional self-employment" because self-employment offers an opportunity to "balance work and family life," whereas men enter self-employment to advance in their careers (e.g. Carr, 1996; Budig,

2006)[5]. Then, the negative effect of "marriage," predicted by the specialization hypothesis, may manifest itself with a higher proportion of women entering unincorporated self-employment, which requires lower levels of accumulated skills and resources[6]. Women might prefer this type of self-employment because it provides more time and flexibility for family obligations than non-professional/low-skill wage jobs (Budig, 2006). If this is true, the specialization hypothesis might imply *a positive role* for marriage on women's entry into self-employment in the form of unincorporated business. Summing up these conjectures, my first hypothesis is:

Hypothesis 1a: Other things being equal, "being married" is positively associated with women's entry into both "unincorporated self-employment" (according to specialization hypothesis) and "incorporated self-employment" (according to social capital and spillover perspective) relative to their never being married.

There is less ambiguity about the effect of marriage on men's transition to self-employment. Both hypotheses predict that marriage might have *an overall positive effect* on men's entrepreneurial self-employment. The specialization hypothesis suggests that men will specialize in market work within the marriage and will thus enjoy better labor market outcomes. Previous literature has consistently reported that marriage has a positive effect on men's entry into self-employment (e.g. Blanchflower & Meyer, 1994). Additionally, the responsibility of being the family breadwinner might increase their desire to control their own productivity and earnings (Wong, 1985; Hundley, 2000). The social capital perspective also suggests that married men enjoy resource and skill spillovers from their wives. Therefore, for men, I propose the following hypothesis:

Hypothesis 1b: Being married increases the likelihood of starting an incorporated business relative to being never-married.

[5] Hundley (2000) claims that the symptoms of such behaviour can be traced in the self-employment earnings gap between men and women. He argues that the earnings of self-employed women decline after marriage because of the division of labour and their specialisation in non-market work.

[6] While incorporated businesses are predominantly concentrated in managerial and professional occupations that require higher skill levels and resources, most unincorporated businesses in the U.S. are prevalent in service-related occupations. Section three provides details about the validity of these two categories.

2.2. Cohabitation, Divorce, Widowhood and Self-Employment

All the previous literature about partners' influence on labor market outcomes considered marriage as the only context in which such interactions take place (Arum, 1997; Bernardi, 1999; Budig, 2006; Parker, 2008; Brown *et al*., 2006). As a result, marital status is often represented by a dichotomous variable where 1 indicates married and 0 includes all other states (e.g. singlehood, cohabitation, being divorced or widowed). This is problematic for the following reasons:

First, it is hard to argue theoretically that the divorced and widowed are similar to the never-married with regard to a partner's resources. At some point, the divorced and widowed had access to all marriage-related resources (network, spillover of skills, etc.), which are not necessarily erased by divorce or widowhood. Therefore, if we believe the predictions of the social capital perspective, being divorced or widowed might be more advantageous—other things being equal—than never being married.

Furthermore, in the absence of a husband, a woman might take the breadwinner role and invest more in market work. There is empirical evidence that women actually increase their labor supply after divorce (e.g. Duncan and Hoffman, 1985). Thus, being divorced or widowed should *be positively associated* with women's self-employment entry. However, experiencing widowhood or divorce can be considered a negative income shock. The presence of children and the lack of sufficient human capital accumulation (increased specialization), which would increase with the duration of the previous marriage, might lead women to enter into the type of self-employment that requires less resources and accumulated skills. Therefore, the second testable hypothesis is the following:

Hypothesis 2a: Being divorced and widowed may make women more likely to enter into unincorporated self-employment than being never-married. However, when children and marriage duration is controlled for; being divorce or widowed is associated with a higher likelihood of entry into incorporated business (according to the social capital perspective).

The specialization hypothesis predicts that men do not experience the negative income shock with divorce to the extent that women do, although divorce can still be a costly affair with alimony payments, legal fees, and the dissolution of economies of scale, because men rely on their own earnings and accumulated human capital in market work. However, gains from specialization may disappear with the loss of a partner. Widowed men might also value time flexibility if children are present. Divorced or widowed men might also continue to enjoy skill spillovers and access to a network to which they were introduced by former partners. When all of these counterweighing effects are considered, we may hypothesize that:

Hypothesis 2b: For men, the relative risk of entering unincorporated self-employment is higher for divorcees and widowers than for the never-married, whereas being a divorcee or a widower does not increase men's relative risk of starting an incorporated business.

There are also important theoretical reasons for distinguishing cohabiting couples from singles. Although cohabitation implies less stability (Smock, 2000), if spousal influences operate as predicted by the social capital hypotheses, we would not expect a difference between cohabitation and marriage. Partners would share their networks, information and other non-financial resources both in cohabitation and in marriage. Recently, Verbakel and De Graaf (2009) found that there is no difference between legally married couples and cohabiting couples in terms of partners' influence on upward mobility. However, cohabitation might suggest a lesser degree of specialization within the household; therefore gender differences between the two types of self-employment might be smaller for cohabiting couples.

One reason why prior literature focused only on married couples (instead of all couples, including cohabitators), may be because marriage is construed as an institution that reduces "labor-income risks" via risk-pooling (e.g. Hess, 2004; Brown *et al*., 2006). Since entry into self-employment implies facing such risks more directly (Ozcan & Reichstein 2009), marriage may provide individuals with greater flexibility for job or career changes because they believe that they can trust their spouses' earning potential, whether they are in the labor market or not (Blau *et al*., 2002). Although sharing non-financial resources might

occur equally in cohabitation and marriage, cohabitation, with its unstable nature, can hardly be considered a risk-reducing institution. Additionally, because there is less specialization for cohabiting couples, women might not be motivated to transition to "unincorporated self-employment" as a way of balancing work and family life. Consequently our third hypothesis is:

Hypothesis 3: Cohabiting women are not more likely to transition to unincorporated self-employment than single women who have never been married. But they are more likely to enter into incorporated self-employment (according to the social capital perspective) than never-married women.

2.3. Partner Characteristics

The social capital perspective does not explicitly make a statement about the direction of influence in regards to transmission of social resources, knowledge spillovers, learning, and network-sharing. Although previous studies often assumed it went from husband to wife (e.g. Devine, 1994; Caputo & Dolinsky, 1998; Bruce, 1999; Budig, 2006), it can also be the other way around (e.g. Arum, 2004; Parker, 2008). However, the key source of social capital is measured by attachment to the labor market. Therefore, spillover of skills, knowledge, and networks/clients are greater when a partner is in the labor market (Bernardi, 1999; Parker, 2008). For the purpose of this study, if the social capital hypothesis holds true, a partner's labor market experience and education positively influence one's likelihood of becoming self-employed. If incorporated businesses require higher level of resources (i.e. human capital, social and financial resources), individuals who have spouses with such resources are more advantaged when starting an incorporated business. From this perspective, prior literature has found that a spouse's self-employment experience increases the propensity of the husband or wife becoming self-employed. For example, Parker (2008) and Bruce (1999) claim that self-employed partners' knowledge transfer plays an important role in the likelihood that both partners will start incorporated businesses. However, the specialization hypothesis predicts that women will be more likely to enter unincorporated self-employed in search of a balance

between work and family life, if their partner is in the labor market. Therefore, in order to test the predictions of the social capital theory, I propose the following hypothesis:

Hypothesis 4a: Having a self-employed partner increases the relative risk that women will start an incorporated business relative to a wage-earning partner.

The social capital and specialization perspectives also predict opposite effects for women's employment status on their husbands' likelihood of starting incorporated businesses. While the former suggests that a working wife may transfer skills and resources (both financial and non-financial) more than a non-working one, the latter suggests that non-working wives might enhance specialization within the marriage, therefore helping their husbands to maximize the gains of marriage. However, having a self-employed wife with a flexible schedule may strike some kind of a balance between the two, providing men an opportunity to both specialize in their market work and enjoy skill and knowledge transfers from their wives.

Hypothesis 4b: Having a self-employed partner increases men's likelihood of beginning incorporated self-employment.

The social capital perspective also predicts that a spouse's education is a positive determinant of an individual's likelihood of becoming self-employed. Particularly, highly-educated husbands and wives may stimulate their partners in labor market participation and towards higher success (Verbakel & De Graaf, 2008), which may also influence their likelihood of starting an incorporated business. Education might also expand the resources available, knowledge, and networks of a couple, all of which may be helpful for the transition to self-employment, especially when starting an incorporated business. This perspective, again suggests a symmetric effect for both genders. Therefore, the last hypothesis is:

Hypothesis 5: Higher levels of partner education (the net of a partner's employment status) may increase the likelihood of transitioning to an incorporated business (according to the social capital perspective), relative to partners with lower levels of education.

3. Data and Methodology

3.1. Data & Sample

Longitudinal data are of crucial importance in understanding the dynamic interrelationships between partnership and self-employment. Thus, using PSID, I constructed marriage and career histories for individuals between 1968 and 2005 to model first entry into self-employment. The PSID began in 1968 with a national probability sample of about 4,800 U.S. households. It conducted annual interviews until 1997 and biannual interviews since then[7]. The yearly information on the life courses of individuals can be used to build and test dynamic models of career choice. In other words, it makes it possible to estimate the likelihood of changing from one employment state to another over a one-year period, if the respondent is at risk of such an event.

In this study the sample of individuals who are at risk is constructed through a series of steps. At the outset, I defined my pool as all *individuals* observed between 1968 and 2005. I matched data on these individuals from both the family and individual questionnaires. From this pool, I excluded individuals who a) never become the head of a family or a wife,[8] b) have an attrition of more than one calendar year with unrecoverable information, and c) start being self-employed in the first year of their labor market experience.

The exclusion of people who never became a head of household or a wife is due to the lack of complete information on their employment history. Because PSID is a household survey, the relevant information for this study has been provided only for the head of household or the wife. By excluding people with unrecoverable attrition, I prevent the possible left-truncation since we cannot be sure about whether such a transition ever occurred

[7] Over the years, scholars have undertaken extensive studies of attrition bias in PSID (e.g. Fitzgerald, Gottschalk & Moffitt, 1998). The conclusions from these studies reveal that attrition has not seriously distorted the representativeness of the PSID.

[8] If there is an adult male in the household, PSID defines him as "the head". Our sample is not a couple-sample. Singles (male or female), who became a head of household at least once are included.

or its exact timing. I exclude the individuals who start their first year in the labor market as self-employed because their duration is 0. Yet the number of such people is negligible[9].

Additionally, I observe these individuals from the time they finish their education until they make the transition. One implication of this rule is the exclusion of all individuals who were born prior to 1949 from the pool of individuals "at risk." Consequently, I avoid the problem of left-truncation in my sample. This procedure gives the data sample an age span of 16 years to 55 years old, this being the timeframe during which the majority of marital and first self-employment transitions occur in an individual's life course.[10] I concentrated on individuals' first entry into self-employment because their later transitions to it are dependent on the success and survival of the earlier ones (Sorensen, 2007).

Overall, my sample includes 11,191 individuals, with about 17% experiencing a self-employment transition in the form of starting an incorporated or unincorporated business. The definitions of these destinations are explained in the next section. Finally, I weighted my sample using longitudinal weights for individuals, which are readily available in the PSID data and made my calculations by carrying forward the cross-sectional probability weights assigned to individuals (and households) in the original 1968 sample[11].

3.2. Measures and Methodology

3.2.1. Models

I use a discreet-time competing-risk model; though the underlying time process is continuous (i.e. people can transition at any point during the year), we can only observe the duration in grouped form (i.e. annual observations).

While estimating the model, I pursued the following strategy. First, I estimated a number of baseline models for which I mainly considered the role of relationship status (being

[9] Only 16 out of approximately 11,000 individuals with continuous life histories started directly as self-employed in their first year in the labor market.
[10] Self-employment transitions after retirement are beyond this paper's focus.
[11] For a more comprehensive discussion of how weights are constructed in the PSID, please refer to Part 5 of the PSID Procedures and Codebook (publicly available at ***http://psidonline.isr.umich.edu/data/weights/).***

never-married, married, cohabiting or divorced/widowed). In these baseline models, I only included measures of *individual resources* that are considered important for self-employment transitions, resources such as education, parental background, previous employment status; other demographic characteristics, like race and polynomial age (which is also our baseline hazard) and other time-varying demographic variables and controls.

In the second step, I reported the results after adding *partner's resources and characteristics* to the baseline model. Both in the baseline model and in models with partner characteristics, I defined the conditional probability of entering two different types of self-employment as competing risks.

I use the multinomial logit link to estimate the competing risk model. Multinomial logit models can also be interpreted as the discreet time model corresponding to an underlying continuous proportional hazards model for multiple outcomes. In practice, both models produce similar results for the estimates of the covariates, as long as the hazard rate is relatively small (Allison, 1992). As Yamaguchi (1991: 16-17) indicates, discreet time models approximate continuous time models when conditional probabilities of the events at each discreet time interval are smaller than 0.10. In my model this is below the 0.01 for each year.

More formally, the following describes the model estimated in this paper; which is nothing but an outcome-specific hazard function for the competing risks of ***k*** outcomes (in our case three: incorporated self-employed, unincorporated self-employed and censored) condition on a set of covariates (***X***):

$$\lambda(y_i = k \mid X_i) = \frac{\exp \beta_k X}{\sum_{k}^{K} \exp(\beta_k X_i)}$$

While competing-risk models describe the conditional probability of entry into different types of self-employment, I provide additional analysis, using individual and household fixed-effects applied to a non-repeated event-history model with a technique suggested by Allison and Christakis (2006). There are certain disadvantages and advantages

to incorporating fixed-effects estimates in my analyses. Section 5 discusses these issues and other sensitivity checks.

3.2.2 Dependent Variables: Two Destinations to Self-Employment

In the construction of the dependent variable, I pursued the following steps: First, I built the dependent variable as a dichotomous dummy where 1 indicates the years in which the individual is self-employed and 0 if otherwise. This procedure is not so straightforward because there have been multiple changes over time in the coding and the scope of employment status variables in the PSID. Therefore, construction of a consistent employment history required a detailed analysis of both individual and family files as well as cross-checking with supplemental employment history files. Based on a number of survey questions, the self-employed in this study are those individuals who classify themselves primarily as "being an employer," "working on their own account," or "being self-employed" (see Dennis, 1996, for the validity of these definitions).

Furthermore, I encountered problems of comparability over time because the relevant PSID question in the earlier waves (e.g. until the late 1970s) provided information at the family level and, in the later years, at the individual level. Thus, for the years when this question referred to the family business, I turned to the employment status of both spouses and assigned the ownership to one of the spouses[12] accordingly.

Self-employment has been growing at both ends of the occupational status distribution in recent years and selection into self-employment types that require high and low levels of skills and resources is highly patterned by gender and education (Carr, 1996; Arum, 2004; Budig, 2006). In order to address these issues, I used an additional question in the PSID data

[12] Low rates of female employment during the early waves allowed me to assign business ownership to husbands successfully. Assigning the ownership of the family business was not straightforward in a mere 12 cases because both partners appeared to be working. To check the sample's robustness, I ran my estimations with and without those cases, neither the signs nor the size of the estimated coefficients changed.

that explicitly asks whether the self-employed individual runs an "incorporated" or an "unincorporated" business.[13]

Incorporation is a process of creating a "legal entity" for a business or an organization. It provides legal benefits such as protection of personal assets, unlike sole proprietorships or general partnerships. Over the last few decades, there has been an increase in the incorporation[14] rate of the self-employed in the U.S. It grew from approximately 2.5% [15] in the late 1980s to 3.6% in 2003. However, the rate of unincorporated self-employment has been declining since the 1970s, falling from 8.9% to 7.5% in 2003 (Hipple, 2004) even though this is often associated with the decline in agricultural employment.

Hipple (2010) argues that individuals incorporate their businesses to obtain the traditional benefits of a corporate structure and we know of no legal change that may directly encourage individuals with certain family structures or of a specific gender to do so. Although the incorporation rate is increasing across all education/occupational classes, the trend is still highly patterned by education level, occupational status and gender. In the following, I discuss why distinguishing self-employment according to incorporation status captures the heterogeneity induced by these variables.

(Table 1 about here)

For example, Table 1 shows the simple distribution of the self-employed by education categories in 2003. According to these figures, more than 42% of the unincorporated self-employed ended their education at high school, or never finished it, while around 30% of them are college graduates or hold advance degrees. These rates are more than reversed for the incorporated self-employed. For example, approximately half (47%) of the incorporated business owners hold college or advanced degrees. In contrast, those without or with only a

[13] Individuals who respond to "*be self–employed*" or "*own a business*" are asked a second question: "Is this business incorporated?"

[14] The U.S. Bureau of Labor Statistics treats the incorporated self-employed as employees of their own businesses, and they have been classified as wage and salary earners in official statistics, Current Population Survey (CPS) and in their publications since 1967 (Hipple, 2004).

[15] As a percentage of the total employment

high school degree drops to 28% among the incorporated business owners. Additionally, Hipple (2010) reports that approximately 35% of unincorporated self-employed in 2008 were working part-time (i.e. less than 35 hours/week) while only around 20% of the incorporated business owners were part-time workers and that more women than men work part-time in both types of self-employment[16].

The educational distribution pattern is also reflected in occupational distribution. Hipple (2004) finds above-average incorporation rates occurring mostly in professional/skill-requiring occupations such as dentists (40.1%), veterinarians (30.9 percent), physicians and surgeons (18.3 %), and lawyers, judges, magistrates and other judicial workers (11.5%). Table 2 below describes the incidence of self-employment in broad occupational groups.

(Table 2 about here)

Figure 1 and Figure 2 show the survival rates in my sample for the transition to self-employment by gender, for incorporated business and unincorporated businesses respectively. Figure 1 shows that men are significantly more likely to realize transition to self-employment as an incorporated business than women (chi2 = 97.16, Pr>chi2 = 0.0000). However, Figure 2 shows that there are few gender differences in (unconditional) transitions to unincorporated business (chi2 =2.43 and Pr>chi2 = 0.1188).

(Figure 1 and Figure 2 about here)

3.2.3. Explanatory and Control Variables

I include both time-varying variables and time-constant independent and control variables. The summary statistics of these controls and covariates are presented in Table 3.

(Table 3 about here)

[16] Hipple (2010) provides a descriptive analysis about the trends of hours of work for the self-employed. He shows that 90% of women who work part-time among the unincorporated self-employed, report doing so for non-economic reasons (i.e. childcare, family and personal obligations). (His study does not report the same information for the "incorporated self-employed"). However, about 80% of part-time working men among the unincorporated self-employed in his study report non-economic reasons for their part-time arrangement.

The main explanatory variables in the models are *relationship status* and *spousal resources*. I generate a "relationship status" variable that includes four categories: being never-married, in cohabitation[17], married, and divorced/widowed.

To account for spousal social resources, I mainly use spouse employment status. I have three categories: spouse not-employed, spouse being a wage earner and spouse being self-employed. Partner's human capital, another social resource, is determined by a spouse's education (described below and in Table 3). As opposed to the ambiguous effects of one's own education, the literature predicts that spouse education has a clear positive effect on self-employment. A partner's education both enhances knowledge transfers between the spouses (Parker, 2008) and increases the family's human capital, when entrepreneurship takes the form of a family business (Sanders & Nee, 1996). For the self-employed, a partner's education also has greater effects on one's earnings than one's own education (Wong, 1986). Both the *relationship* indicators and *partner variables* are lagged one year.

Previous studies identified a number of factors as important predictors of self-employment migration. To account for these, I included two sets of controls. The first pertains to individual resources: Education, in this respect, is the classic indicator of human capital endowment in the literature. The relationship between education and self-employment is not very clear. Previous literature on the U.S. has found education to have an ambiguous effect of on self-employment migration. While the effect of education on starting an incorporated business has been insignificant (e.g. Dunn & Holtz-Eakin, 2000), Arum (2004) finds this effect to be positive and strong for women, and negative for men, except for professional/skilled self-employment. Budig (2006) reports a positive effect in general that did not vary by gender. In a way, this ambiguity reflects the existence of two counter-arguments. On one hand, education enhances human capital and access to essential

[17] PSID started collecting data on cohabitation in 1983. However, there are ways of recovering some cohabitation information for the previous years. The algorithm for recovery files is available upon request. For robustness, I estimated all the models that include cohabitation both on the post-1983 sample and in the full sample.

entrepreneurial resources, such as financial capital (Evans & Jovanovic, 1989). The more educated also tend to be better informed and more adept at assessing self-employment opportunities. On the other hand, education tends to relate positively to higher salary, and consequently to slack behavior, due to a lack of motivation. The latter argument also contends that too much specialization occurs at certain levels of education and that this can become an impediment to individuals starting up their own businesses (Blanchflower, 2000).

The "education" variable[18] is used in two different ways: First, it continuously measures the grades completed by the individual at each level of schooling. Second, I grouped the individuals in comparable educational categories. Hence, the variable *the highest grade completed* is classified into five broad educational categories (<12, 12, 13, 14, 15<) whose corresponding values are listed in Table 3. This categorization is applied to variables measuring both individuals' levels of education and that of their partners' in the analyses.

Because I model entry into self-employment from any state of origin since the first entry into the labor market, the transition to self-employment can be either from "salaried employment" or from "non-employment." I differentiated the transitions from these categories by introducing a time-varying variable that indicates whether an individual was previously a wage earner or not working (see Arum, 2004; Budig, 2006 and Sorensen, 2007 for a similar practice)[19].

Age is a typical demographic control variable. However, in my specifications age and age-square serve the purpose of assessing duration dependence[20].

I use two distinct variables to control parental background. First is whether an individual's father was self-employed. This is a standard variable in most entrepreneurship studies and captures the intergenerational inheritance effect of self-employment. Second is the

[18] Note that because the risk set constitutes individuals being followed after ending their education, this variable is time-invariant.

[19] Because we run separate models for men and women the coefficient of this variable also depends on gender. This is unfortunately ignored in many studies (e.g. Arum, 2004; Sorensen, 2007) although transitions from unemployment/inactivity to self-employment might also be theoretically different for men and women.

[20] As a baseline hazard, I also used polynomial time. All the coefficients remained virtually the same. Yet, when time is included as a measure of duration dependency, age cannot be controlled for due to multicollinearity.

parent's socioeconomic status. This is a categorical variable indicating whether the parent's economic status was poor, average or well-off when the individual was growing up. This variable also constitutes a proxy for social class, wealth or parental financial resources.

Studies show that self-employment rates differ across ethnic groups in the U.S., with black and (to a lesser degree) Hispanic individuals often negatively associated with self-employment transitions (Aldrich & Waldinger, 1990; Hout & Rosen, 2000) and race is a standard background-related social capital measure in U.S. literature. Thus, I include a three category race variable in the models (White, Hispanic and Black Americans).

I also include a time-dependent variable for the cumulative number of children born to each individual. When there are no children, this variable takes the value zero. Children might affect divorced/widowed individuals' self-employment decisions and might generate different motivations for men and women to transition between employment statuses. While men might have greater motivation to take control of their productivity in the event of childbirth; women might look for stability and remain in salaried jobs. Additionally, since the time spent in marriage might influence decision-making process and resource accumulation, I included a time-dependent duration variable into my specifications. Marriage duration is a clock variable that counts the years passed in each marriage for a given individual[21].

The second set of control variables are related to environmental conditions. The macro-environment could have heterogeneous effects on self-employment transition rates. In the U.S., self-employment rates vary significantly across states. An expansion of selected industries in certain states and gradual changes in laws and regulations across-states might also affect self-employment tendencies differentially. In order to control for state-level effects over time; I construct a variable "State Self-Employment Rate" that shows the ratio of self-employment to total employment in each state by year. Data for this variable comes from the U.S. Bureau of Economic Analysis – Regional Economic Accounts.

[21] I also tried a quadratic function of marriage duration to account for cumulative nature of marriage specific capital.

4. Results

4.1. Results for Women

Table 4 shows the results of the multinomial logit models for women's transitions to self-employment, including only the variables relating to *their characteristics and relationship status*. It reports the results for five different specifications regarding the transition to self-employment. Coefficients are expressed in terms of "relative risk ratios" to ease interpretation[22]. The baseline category is defined as "not making any transition" (i.e. remaining salaried or not employed).

(Table 4 about here)

The first model shows the unconditional correlation between relationship status in the previous year and the likelihood of entering into incorporated and unincorporated types of self-employment, taking only the duration dependency into account. Subsequently, in Models 2 through 5, I gradually introduce different sets of control variables. Model 2 includes individual characteristics such as; previous employment status, race and education. Model 3 includes parental background indicators. Model 4 takes into account the duration of marriage and the number of children. Finally, Model 5 incorporates environmental variables such as the amount of time spent out of employment (i.e. unemployment or inactivity), as well as the resident state's self-employment rate.

The first model shows that *being married* is associated with a 50% increase in the relative risk of transitioning into an unincorporated self-employment, and an increase about 80% in the relative risk of starting an incorporated business, compared to never being married. Although the positive effect of marriage (in Model 1) on both types of self-employment transition becomes insignificant with the inclusion of individual characteristics and parental background indicators (in Model 2 and Model 3); it turns significant again, once we control for the duration of marriage and the number of children (in Models 4 and 5). The final model

[22] Tables 5, 6 and 7 also report "relative risk ratios" but throughout this section, I used the term "relative odds" loosely to refer "relative risks" to improve clarity, despite the obvious differences between the two.

shows that *being married*—compared to being single—increases the relative risk of starting an incorporated business by about twice, and the relative risk of entering an unincorporated self-employment by about 1.5 times, even when we include the full set of control variables.

These results confirm Hypothesis *1a*, which predicts that *being married* is positively associated with unincorporated self-employment for women because this type of self-employment may demand lower levels of accumulated skills and may provide some flexibility to balance work and family life. Hypothesis 1a predicted that marriage would also positively affect women's likelihood of starting an incorporated business since the availability of resources would be enhanced with the marriage, which is also confirmed (in Models 4 and 5).

Note that the positive effect of marriage is a net of factors that hint towards further specialization in the marriage[23]. Moreover, the effects are relative to the baseline outcome (of not making any self-employment transition). Thus, it is hard to know from these results whether marriage increases the relative risks of choosing one type of self-employment over other. To answer this question, I estimated the effect of *being married* on the relative risk of choosing incorporated self-employment over unincorporated self-employment, which turned out to be insignificant (not reported).[24]

Hypothesis 2a has two parts. Its first part predicts that being divorced or widowed may increase the likelihood of entering into unincorporated self-employment in comparison to never being married. This prediction is confirmed by the results reported in Model 1, Model 2 and Model 3. These models show that being a divorcee or a widow in the previous period increases the relative risk of becoming an unincorporated self-employed person by about 1.4 times. This is in line with the interpretation that divorced or widowed women may not have enough resources or accumulated skills to start an incorporated business, but they may still need some flexibility if the children are present.

[23] It may be conceptually questionable whether one should control (i.e. net out) these factors at all.
[24] Additional post-estimation tests were run on the coefficients of Model 5 and are available upon request.

The second part of Hypothesis 2a predicts that, if the duration of marriage and the number of children are controlled for; being divorced or widowed may in fact increase the likelihood of starting an incorporated business relative to being never-married, because divorcees or widows may still enjoy some marriage-related social resources. Model 4 and Model 5 show that this is exactly the case. Conditional on marriage duration and presence of children, being a divorcee or a widow increases the relative odds of entering into incorporated self-employment by about 80% and the coefficient for entering unincorporated self-employment becomes insignificant.

Finally, Hypothesis 3 suggested that cohabiting women are not more likely to enter unincorporated self-employment than never-married women. This is because both the degree of specialization and the motivation for a self-employment to balance work and family-life is lower in cohabitation. In contrast, although cohabitation may not provide as much financial security as marriage, cohabiting couples may still enjoy a spillover of skills and share other resources similar to married couples. Therefore, they may be more likely to enter self-employment for career advancement than never-married women, as suggested by the second part of Hypothesis 3.

The results confirm the first part of Hypothesis 3, as there is no significant effect for cohabitation relative to being never-married, on women's entry into unincorporated self-employment. However, the second part of Hypothesis 3 is *not confirmed* because again cohabitation is not significantly more conducive to entrepreneurial self-employment than being never-married. These findings imply that either cohabitation is not as fruitful a context as marriage for skill spillover and for sharing social resources or that these factors alone are not enough for women to start an incorporated business. Testing the coefficients of cohabitation against marriage suggests that there is more to marriage as a context for entrepreneurship than skill spillover, which may happen similarly in cohabitation[25].

[25] Cohabitation occurs at a different stage at the life-course than marriage, which may also drive these results.

Other contextual effects happen in expected directions. For example, relative odds of a transition to any type of self-employment are approximately two times higher for white women relative to black women, a fact that is well observed in the previous literature (Nee & Sanders 1996; Hout & Rosen 2000; Parker 2008). Women are also more likely to become self-employed (i.e. any type) if they are not employed in the previous term, relative to salaried women. Having 'a self-employed father' does not have a significant effect on women's self-employment transitions. Yet, women whose parents had high socio-economic status are about twice as likely to start an incorporated business than women whose parents had a low socio-economic status. Number of children is also found to be an important predictor and it increases the relative risk of transition into *unincorporated* self-employment by about 1.2 times. As an environmental factor, the state self-employment rate is strongly and positively associated with unincorporated businesses, but the data shows no relationship with incorporated business transitions. This is also not surprising since most variation in the state self-employment rate comes from unincorporated businesses (Arum, 2004).

Overall, the effects of these covariates confirm most findings in previous literature, except father's self-employment. My data show no significant association between one's self-employment transition and the father's self-employment although part of the father-effect might be captured by parents' socio-economic status. Previously, Dunn and Holtz-Eakin (2000) found a strong association between a father's and a son's self-employment behavior and they claim that the transmission of human capital is far more important than the transmission of financial resources. Alternatively, Arum (2004) finds that a father's self-employment has no effect on women's entry into professional or unskilled self-employment. My findings are similar to Arum (2004)'s, suggesting a gender difference in intergenerational transmission of self-employment.

4.2. Results for Men

In Table 5, I follow the same strategy for men as I do for women in Table 4. Table 5 reports the effect of relationship status and individual characteristics on men's self-employment transitions.

(Insert Table 5 about here)

From Model 1 without control variables to Model 5 with full controls, all specifications show that for men, being married relative to being never-married increases the risk of both starting an incorporated business and entering unincorporated self-employment by about 1.5 times. These results confirm Hypothesis 1b, which predicted that being married increases men's likelihood of starting an incorporated business because both the specialization hypothesis and the social capital perspective suggested a positive role for marriage on men's entrepreneurial migration. However, being married also increases men's relative risk of an unincorporated self-employment transition, which is a surprising result as long as we consider this type of self-employment as low-rewarding and less demanding, in terms of resources and skills.

As in the case for women, I estimated the effect of *being married* on men's relative risk of choosing an "incorporated self-employment" over an "unincorporated self-employment" in order to understand whether marriage increases the relative risks of choosing one type of self-employment over the other. It turns out that being married increases the relative risk of choosing an incorporated self-employment over an unincorporated self-employment by about 2%[26], a slight difference, but a result which is in line with the expectation in Hypothesis 1b.

One interesting pattern observed relates to cohabitation. Unlike women, for men cohabiting with a partner significantly increases the hazard of transition to unincorporated self-employment by about 2.5 times more than being never-married, which is consistent

[26] Significant at the 95% level.

across all models. This suggests that the relative risk of entering into this type of self-employment is higher for men in cohabitation than in marriage[27].

Hypothesis 2b suggested that for men, being a divorcee or a widower would increase the relative risk of entering into unincorporated self-employment, but it would have no effect on the likelihood of starting an incorporated business. This hypothesis is confirmed since models 1 to 5 find that being a divorcee or a widow increase the relative risk of entering into unincorporated self-employment by about 1.6 times. This is not surprising because although divorced or widowed men might have less resources and motivation than married men to start an incorporated business, they do have more access to marriage-related resources than never-married men. Although experiencing the dissolution of a marriage or the loss of a wife can be considered negative shocks, these events might still cause men to take control of their productivity via unincorporated self-employment.

Coefficients of the other covariates for men are also in the expected directions. For example, while having the highest level of education (>15 years of schooling) has no effect on women, for men it increases the relative risk of transition into incorporated self-employment by about three times and reduces the relative risk of transition to unincorporated self-employment by about 40%. White men and men with well-off parents are about two to three times more likely to start an incorporated business than black and poor men respectively. Hispanic men are also two times more likely to start an incorporated business than black men. Those who grew up with well-off parents are also less likely to start enter into unincorporated self-employment. The inclusion of the number of children in the sample also helps to separate the marriage effect from the child effect. The results imply that for men, like women, marriage generates a tendency for self-employment through other mechanisms than those triggered by childbirth. Finally, and not surprisingly, men who were not employed previously

[27] Calculated proportion of two relative risk ratios relative to the baseline category.

are also twice as likely to enter into unincorporated self-employment than men who are employed.

4.2. Partner effects

Now we go one step beyond the contextual effects of relationship status and explore the effects of partner characteristics on an individual's hazard of being self-employed. Tables 6 and 7 below contain models with variables related to partner's resources, in addition to their own characteristics explored previously. There are three multinomial logit specifications to estimate competing risks for each type of self-employment.

(Table 6 and Table 7 about here)

The three models in each table gradually add different indicators of spousal resources. The first models in both tables are the same as the last models in tables 4 and 5, with no spousal resources included[28]. In the second model, I include the partner's employment as an indicator of partner's social resources (i.e. human and social capital). The reference category here is "partner is a salary/wage earner."

An interesting finding is that, for women, having a self-employed partner increases the relative risk of starting an incorporated business by about 3.5 times compared to having an employed partner *ceteris paribus*. This result provides evidence for the theory of knowledge spillovers, resource-sharing, and hence confirms hypothesis 4a.[29] We do not observe a similar effect for men: Having a self-employed partner does not significantly increase the relative risk of men entering into any type of self-employment, and thus we reject hypothesis 4b. Yet, when we control for partners' employment status, the effect of cohabitation increases the relative risk of men transitioning to both types of self-employment by twice as much as for men who are never-married or single. This may imply some role for specialization among the

[28] The coefficients may be slightly different because sample sizes in these models are different.
[29] These findings may also imply wives joining husbands' incorporated businesses; however I cannot test this hypothesis with the current data.

cohabiting couples since the sign of influence depends on the other partner's employment status.

The final hypothesis about partner characteristics relates to the partner's education as an additional source of human capital and it predicts that higher education has a positive effect on starting an incorporated business for both genders. Yet, for men, when we include the partner's education in the model (see Model 3 in table 7), relative to having a partner with the highest education level, having a wife with a associate degree or some college degree has a negative effect on the relative odds of transitioning into unincorporated self-employment and incorporated self-employment. This effect is not found for women, and therefore, only confirms the predictions of hypothesis 5 for men.

5. Additional Specifications and Sensitivity Checks

5.1 Fixed-Effects Models

To ensure the robustness of the findings, I estimated a set of models with individual and household fixed-effects (Tables A1, A2 and Table A3), reported in the Appendix respectively. Fixed-effects models have the advantage of controlling for an individual's stable, unobserved characteristics, such as inherited risk preference for entrepreneurial activity. Additionally, since partners share the same household environment, incorporating household fixed effects might be useful for taking into account unobserved factors, which may influence both partners' self-employment transitions. Furthermore, lag operators can be good instruments to avoid reverse causation, especially when they are used with individual fixed effects.

However, incorporating fixed effects is not straightforward in duration models with non-repeated events. It requires the use of an innovative technique such as that suggested by Allison and Christakis (2006), because maximum likelihood estimates cannot be obtained for

the fixed effects due to a *complete separation problem*[30]. This problem is generated by the presence of a monotonically increasing duration-dependence term (e.g. age and age^2 in our case). Because in these models all the events occur in the last observation unit, an increasing function of time perfectly predicts the outcome, causing a non-convergence.

Allison and Christakis (2006) suggest that a solution to this type of non-convergence can be reached by reversing dependent and independent variables, as long as both of them are categorical. Then one can introduce a duration-dependence term and any other variable before implementing the fixed effects, as if it is a standard logit model. They show that the estimated coefficient will be unbiased and exactly the same as the coefficient of interest because the odds-ratios are symmetric. The estimates produced by this method would be preferable to the standard logit estimates, excluding duration dependence, because those obtained by ignoring time will be biased. Yet, a limitation of this technique is that it requires both the dependent and the independent variable to be dichotomous[31].

Tables A1 and A2 report estimates of logit models with individual fixed effects—using the procedure explained above—for women and for men respectively. Because the models are identified only by positive values (transitions or events), censored cases are dropped. Thus, the sample sizes are equivalent to the events in these models. The first three models in Tables A1 and A2 use "transition into unincorporated self-employment" as the dichotomous dependent variable. The next three models report specifications whereby the binary dependent variable is "transition into an incorporated self-employment". I report one model for each explanatory variable of interest: "presence of a partner" (married or cohabiting), as well as "cohabitation" and "marriage". Individual fixed-effects control for other contextual variables like race, parental background and education, thus they are excluded from the specifications.

[30] Typical commands, such as **xtlogit** or **clogit,** in STATA yield non-convergence.

[31] The authors mention that this method may also work for dependent and independent variables that are categorical by applying a multinomial framework. However, I found that this procedure does not generate reliably stable parameters.

Table A1 shows that, for women, the impact of marriage has changed somewhat. Being married is not associated with incorporated self-employment transitions anymore, and only increased the relative odds of transitioning to an unincorporated self-employed approximately two-fold. These results are in line with the interpretation that married women become self-employed because of work and family conflicts, not for career mobility, and hence they are more likely to enter into unincorporated self-employment, as predicted by the first part of hypothesis 1a. However, Table A2 shows that marriage -but not cohabitation- increases men's likelihood of their entering both from incorporated and unincorporated self-employment to self-employment by approximately 2 and 1.5 times respectively, confirming the findings in Tables 5 and 7 and Hypothesis 1b.[32]

Finally, Table A3 reports household fixed-effect models for both men and women. The main explanatory variables are partners becoming self-employed or salary-earners. Looking only at the "couple data" and controlling for all stable characteristics at the household level, we find that a partner's self-employment increases the odds of their becoming an unincorporated business owner about 2 to 2.5 times for both women and men, relative to their partner being either a wage-earner or not employed. However, for men it also increases the likelihood of their transitioning to being in incorporated self-employment by about 2.5 times, which is not observed for women. These findings confirm hypothesis 4b, but not hypothesis 4a, and also contradict the findings in section 4.2. However, results of the models with household fixed effects should be interpreted with caution for a number of reasons: First, these models pool wage-earner partners and partners that are "not employed" in the same reference category, which is not suitable for testing hypothesis 4b. Furthermore, controlling for unobserved factors at the household level may also factor away some of the partner effects we are interested, such as skill transfers, sharing social resources and learning, especially if these are among the stable characteristics of a household.

[32] The effect of cohabitation on men's transition to unincorporated self-employment has disappeared when individual fixed effects are introduced.

5.2. Other Specifications

I have tried other types of sensitivity analyses as well. For example, I also estimated the same models with different baseline hazards (e.g. polynomial year and logarithmic time). Doing so did not change the results. I also tried including different control variables mentioned in previous literature—for example, environmental controls like "city size" and "state level growth rate." They turned out to be either highly correlated with the existing variables or their inclusion did not improve the overall model.

Perhaps the most theoretically relevant sensitivity analysis would be including a measure of the partner's financial resources in the models. However, including partners' financial resources is problematic for a number of reasons. First of all, it adds another level of endogeneity since spouse earnings is a function of their labor supply and thus, a potential outcome of negotiation between partners. Therefore, I included "spouse's hourly wage rate[33]" (a measure that is net of labor supply and a more direct measure of productivity) as in the models. The coefficient for this measure in every model turned out to be insignificant. PSID data also made it difficult to include any measure of family income or spouse earning to take into account access to financial resources, because, after the year 1997, income variables are only reported every other year, creating gaps and a high number of missing observations in the duration data, especially for the younger individuals. However, trying to include measures of family income only to models estimated in the pre-1997 sample did not turn out to be significant either. Furthermore, it barely affected the coefficients of other variables.

6. Conclusions

This paper contributes to the growing literature on the relationship between self-employment and family context by expanding the research focus to include not only marriage but also other relationship arrangements such as cohabitation, being divorced or a widow or

[33] This variable is takes the logarithmic form and lagged one year.

single, as well as the influences of partners. I build on the previous research, which suggests that men and women have different motivations for participating in the labor market and face different constraints in their career mobility. Since different types of self-employment may be regarded as a form of labor market participation and as a vehicle of career mobility; I consider both entrepreneurial transitions (i.e. starting incorporated businesses) and transitions into unincorporated self-employment. This paper argues that men and women's choice of self-employment type may be an outcome of their relationship context, which ultimately shapes their constraints and resources as well as their motivations. Five main hypotheses are formulated about the link between individuals' relationship statuses; their partner characteristics and their self-employment behavior. The majority of those hypotheses were confirmed.

Overall, the results suggest that being married is an important determinant of both types of self-employment transitions (i.e. incorporated or unincorporated) for men and for women, especially after controlling for factors that reinforce specialization in marriage, such as marriage duration and children. While for men these results are robust across different specifications; the positive effect of marriage on women's entrepreneurial migration disappears in the models with individual fixed effects. In these models, marriage appears to only contribute to women's transition into unincorporated self-employment, which may support the idea that married women enter into self-employment to balance work and family life.

Overall, cohabitation is a less supportive arrangement for self-employment transitions for both genders. It only increases men's likelihood of entering into unincorporated self-employment, which is a less resource-requiring type of self-employment. This is an interesting result, as it suggests that marriage is a more fruitful context for self-employment than singlehood and it provides something more than a partner (which is also available in cohabitation). These findings imply that the positive effect of marriage cannot be explained

only through spillover effects between spouses since similar effects should, in theory, be observed also among cohabitant partners.

It may be argued that tax incentives for the married govern self-employment dynamics and encourage family businesses, although fixed-effect estimates and state-level controls would have captured some of the effects of tax incentives. The results also show that divorced or widower men and widowed women are more likely to enter into self-employment in the form of unincorporated businesses. However, for women, when we control for the duration of previous marriages and the number of children born, divorce or widowhood become more supportive for entrepreneurship than never being married. All of these results imply a more prominent role for marriage and access to marriage-related resources for entrepreneurial migration.

To the extent that my variables measure spousal resources, I find evidence of some of the predictions of the social capital thesis, especially for women. When spousal employment status is considered as a measure of social capital, having a self-employed partner positively influences a woman's likelihood of becoming self-employed. This outcome is consistent with one prediction of the social capital hypothesis: resourceful spouses positively contribute to spousal attainment and success.

This study has a few caveats worth mentioning. The first involves the selection into self-employment and marriage due to unobservable factors. Preferences for the type of labor force participation and family formation might, in fact, be correlated. These preferences may lead to a number of decisions being taken along the life-course that produce a complex endogenous process between career and family formation. It is not easy to unpack all the levels of endogeneity in this process, although the inclusion of lagged variables and fixed effects aims to address them to a certain degree. One important example is assortative mating based on self-employment propensity (Parker, 2008). Spouses can choose each other for many reasons. Along with age, the most common factor in assortative mating has been education

(Bernasco *et al*., 1998). Unlike much of the previous work, in this study, I implicitly control for the assortative mating on observable characteristics, such as education, as well as employment status, although I do not model assortative mating explicitly. In fact, partners may match on their self-employment propensity. Moreover, there might be other unobserved characteristics of the partners that drive them towards self-employment and towards partnership with specific individuals. From this perspective, these results should be only considered as a careful *description* of conditional transition patterns into two types of self-employment.

Second, separating self-employed into incorporated versus unincorporated businesses might not fully capture the gendered and skilled nature of all self-employment professions. From Tables 1 and 2 it appears that some of the low-skill (resource) requiring occupations are incorporated and some portion of highly professional occupations are unincorporated. Furthermore, the changeability of these concepts over time might also have implications for my hypotheses. But a further categorization of the self-employed can be problematic conceptually and has not been possible with the current data because of the limited size of the sample.

Sample-related problems also limited my capacity to analyze spousal financial resources and the other financial resources available in each relationship arrangement in depth. For example, household wealth (the data for which is only available for selected waves in the PSID study) varies considerably in accordance with family structure and married couples are known to save more and hold more wealth than the never-married and divorced (Lupton and Smith, 2003). However, to my knowledge, no study to date considers the complex mechanisms linking self-employment transitions, family structure and the role of wealth, which would be a promising future direction for research seeking to enhance understanding of the nexus between self-employment and family context.

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Table 1. Distribution of the Self-employed by Education and Gender (2003)

	Unincorporated Self-employed			Incorporated Self-employed		
	Total	**Men**	**Women**	**Total**	**Men**	**Women**
Less than High School	*10.6*	12.7	7.3	*4.9*	5.1	4.4
High School graduates	***31.4***	**32.4**	**29.7**	*23.1*	23.0	23.1
Some college	*18.3*	17.7	19.2	*18.3*	17.6	20.2
Associate degree	*8.5*	7.1	10.8	*7.4*	7	8.6
College graduates	*18.9*	17.9	20.5	***28.4***	**28.5**	**28.2**
Advanced Degree	*12.3*	12.2	12.5	*17.9*	18.8	15.5
Total (%)	*100*	100	100	*100*	100	100
N	9936	6186	3750	4896	3586	1310

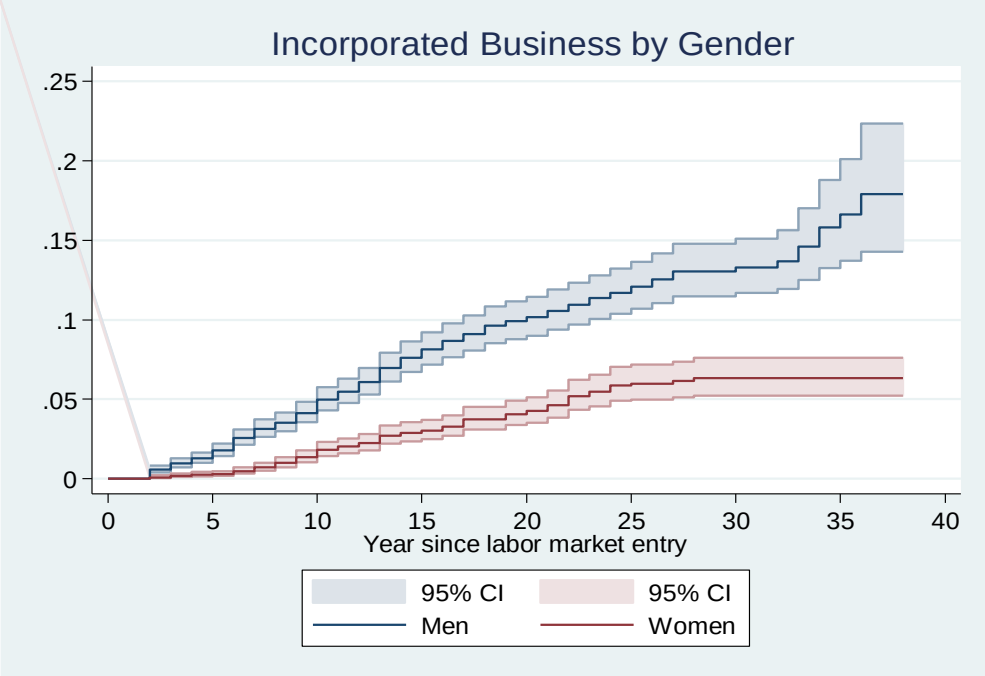
Source: Author's recalculations of the Table 3 of Hipple (2004), which uses Current Population Survey (CPS) 2003. Author introduced the confidence intervals to the table and found that the observed differences are significant (Pearson Chi^2= 413.927, Pr = 0.000).

Table 2. Self-Employment Rates by Gender and Occupation

Occupation	**Unincorporated Business**			**Incorporated Business**		
	Total	**Men**	**Women**	**Total**	**Men**	**Women**
Management. professional and related occupations	8.7	11.3	6.2	5.9	8.8	2.8
Service occupations	7.7	5.9	9	1.1	1.5	0.9
Sales and Office Occupations	5.5	7.2	4.5	3.5	5.8	2.3
Natural Resources (e.g. Farming. Fishing) construction, maintenance	12.6	12.7	11	3.3	3.3	2.2
Production. transportation and material moving occupations	3.8	4	3.3	1.2	1.4	0.6

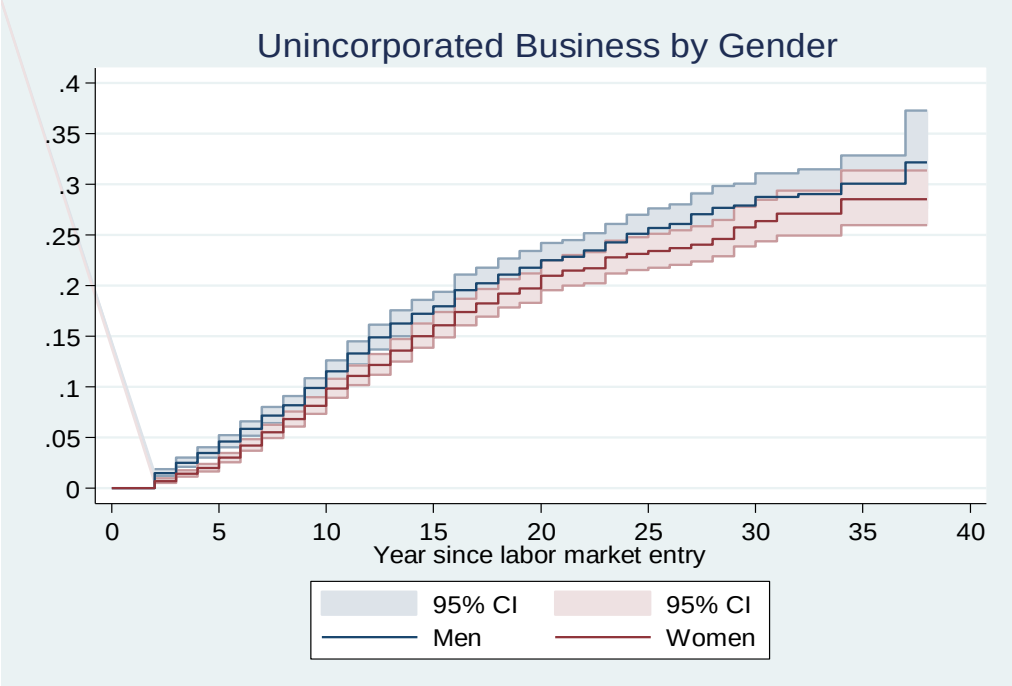
Source: Recalculations from Table 7 of Hipple (2004) which are derived from CPS (2003) and Hipple calculated self-employment rates by dividing the number of self-employed workers in a specified worker group by total employment in the same group.

Figure 1- Survivor Function for the First Transition to Self-Employment - *Incorporated Businesses* by Gender



Note: PSID 1968-2005 annual observations, sample is weighted by 1968 individual weights.

Figure 2- Survivor Function for the First Transition to Self-Employment- *Unincorporated Businesses* by Gender



Note: PSID 1968-2005, own calculation.

Table 3. Descriptive Statistics of the Main Variables (1968-2005)

	MEN				WOMEN			
Variables	**Mean**	**Std. Dev.**	**Min**	**Max**	**Mean**	**Std. Dev.**	**Min**	**Max**
Unincorporated Self-Employed	0.013	0.11	0	1	0.011	0.1	0	1
Incorporated Self-Employed	0.006	0.08	0	1	0.002	0.04	0	1
Age	30.06	7.95	17	57	30.01	7.93	17	57
Age^2	966.74	527.82	289	3249	963.32	522.57	289	3249
Relationship Status								
Never Married	0.28	0.45	0	1	0.26	0.44	0	1
Married	0.66	0.48	0	1	0.56	0.50	0	1
Cohabiting	0.02	0.16	0	1	0.03	0.16	0	1
Divorced/Widow	0.04	0.20	0	1	0.11	0.31	0	1
Not employed	0.13	0.34	0	1	0.34	0.47	0	1
Race								
White	0.65	0.48	0	1	0.58	0.49	0	1
Black	0.31	0.46	0	1	0.38	0.49	0	1
Hispanic	0.04	0.20	0	1	0.03	0.18	0	1
Education								
1. Less than High Sch.(<12)	0.15	0.35	0	1	0.15	0.44	0	1
2. High School (12)	0.44	0.49	0	1	0.45	0.49	0	1
3. Some College(13)	0.07	0.26	0	1	0.08	0.28	0	1
4. Associate Degree (14)	0.10	0.30	0	1	0.10	0.30	0	1
5. College and above (>15)	0.22	0.42	0	1	0.19	0.39	0	1
Parental Background								
Father Self-Employed	0.03	0.16	0	1	0.02	0.15	0	1
Parent's SES: Poor	0.34	0.47	0	1	0.27	0.45	0	1
Average	0.44	0.50	0	1	0.40	0.49	0	1
Well-Off	0.29	0.45	0	1	0.27	0.44	0	1
Other Controls								
Number of Children	1.17	1.22	0	9	1.29	1.18	0	9
Marriage Duration	5.78	6.92	0	37	4.88	6.61	0	37
Non-Employment Duration	0.31	1.17	0	33	1.50	3.30	0	33
State Self-Employment Rate	16%	0.03	4%	30%	0.16	3%	0.04	29%
N	**54616**				**62174**			

Note: observations are person-years

Table 4. Relationship Status and Competing Risk Model of Self-Employment Transition for *Women*

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Unincorp.	**Incorp.**	**Unincorp.**	**Incorp.**	**Unincorp.**	**Incorp.**	**Unincorp.**	**Incorp.**	**Unincorp.**	**Incorp.**
Relationship Status (Reference Cat: Never Married/ Single)										
Married	1.473***	1.793**	1.151	1.384	1.160	1.450	1.521***	2.000**	1.475***	2.057**
	(0.154)	(0.473)	(0.124)	(0.385)	(0.125)	(0.411)	(0.188)	(0.660)	(0.183)	(0.686)
Cohabiting	1.316	1.881	1.176	1.778	1.173	1.777	1.045	1.720	1.038	1.739
	(0.340)	(1.049)	(0.305)	(0.999)	(0.305)	(1.006)	(0.275)	(0.976)	(0.272)	(0.990)
Div./ Wid.	1.435**	1.669	1.391**	1.857*	1.395**	1.965*	1.146	1.874*	1.134	1.892*
	(0.212)	(0.563)	(0.209)	(0.642)	(0.210)	(0.683)	(0.176)	(0.650)	(0.175)	(0.653)
Age	1.485***	2.104***	1.543***	2.088***	1.542***	2.083***	1.511***	2.136***	1.549***	2.118***
	(0.078)	(0.234)	(0.082)	(0.227)	(0.082)	(0.227)	(0.080)	(0.237)	(0.084)	(0.235)
Age^2	0.994***	0.989***	0.993***	0.990***	0.993***	0.990***	0.994***	0.989***	0.994***	0.990***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Non-Employed			1.862***	1.754***	1.855***	1.708***	1.765***	1.800***	2.154***	1.617*
			(0.159)	(0.338)	(0.159)	(0.329)	(0.158)	(0.357)	(0.245)	(0.447)
Race (Ref. Cat: Black)										
White			2.031***	1.982***	2.041***	1.769**	2.243***	1.820**	2.097***	1.785**
			(0.191)	(0.457)	(0.196)	(0.424)	(0.223)	(0.435)	(0.210)	(0.428)
Hispanic			1.438	1.328	1.456	1.439	1.548*	1.444	1.383	1.401
			(0.335)	(0.815)	(0.340)	(0.884)	(0.360)	(0.890)	(0.325)	(0.854)
Education (Ref Cat. Less than High School: <12)										
2. Educ. (12)			0.860	1.761	0.847	1.565	0.844	1.557	0.825	1.596
			(0.178)	(1.389)	(0.175)	(1.235)	(0.175)	(1.228)	(0.172)	(1.264)
3.Educ. (13)			0.891	1.986	0.872	1.594	0.902	1.520	0.849	1.595
			(0.163)	(1.452)	(0.162)	(1.181)	(0.168)	(1.126)	(0.160)	(1.207)
4.Educ. (14)			0.870	2.780	0.847	2.165	0.879	1.968	0.807	2.055
			(0.169)	(2.057)	(0.167)	(1.631)	(0.175)	(1.485)	(0.162)	(1.572)
5.Educ. (>15)			0.930	3.571*	0.898	2.718	0.901	2.387	0.842	2.516
			(0.186)	(2.642)	(0.182)	(2.055)	(0.185)	(1.811)	(0.175)	(1.949)
Father Self Employed					1.151	1.747	1.162	1.783	1.166	1.790
					(0.264)	(0.685)	(0.266)	(0.691)	(0.266)	(0.693)
Parent's SES Status (Ref. Cat. Poor)										
Average					0.984	1.740**	1.013	1.744**	1.022	1.752**
					(0.096)	(0.461)	(0.099)	(0.464)	(0.099)	(0.466)
Well Off					1.152	2.391***	1.159	2.403***	1.169	2.397***
					(0.119)	(0.634)	(0.120)	(0.637)	(0.120)	(0.640)
Number of Children							1.151***	0.945	1.158***	0.936
							(0.042)	(0.080)	(0.043)	(0.081)
Marriage Duration							0.943***	0.963	0.945***	0.961*
							(0.010)	(0.022)	(0.010)	(0.022)
Duration in Non-Employment									0.962**	1.023
									(0.015)	(0.035)
State Self Employment Rate									245.366***	9.770
									(330.740)	(31.790)
Log- Likelihood	-4552.915		-4480.45		-4471.70		-4451.74		-4439.76	
Chi^2	139.32***		253.36***		274.65***		326.16***		345.25***	
BIC	9238.28		9247.89		9296.61		9300.85		9321.04	
	62174		62174		62174		62174		62174	

Coefficients represent the relative risk ratios (RRR).Baseline category is "no transition" *: p <0.1, **: p <0.05, ***: p<0.01. Standard errors are clustered at the individual level. Sample is weighted by individual longitudinal prob. weights.

Table 5. Relationship Status and Competing Risk Model of Self-Employment Transition for *Men*

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Unincorp.	Incorp.	Unincorp.	Incorp.	Unincorp.	Incorp.	Unincorp.	Incorp.	Unincorp.	Incorp.
Relationship Status (Reference Cat: Never Married)										
Married	1.254*	1.501**	1.309**	1.532**	1.306**	1.515**	1.575***	1.537**	1.571***	1.535**
	(0.146)	(0.265)	(0.164)	(0.281)	(0.164)	(0.278)	(0.207)	(0.308)	(0.206)	(0.308)
Cohab.	2.503***	1.448	2.520***	1.699	2.524***	1.707	2.335***	1.674	2.334***	1.688
	(0.514)	(0.566)	(0.530)	(0.669)	(0.532)	(0.675)	(0.499)	(0.663)	(0.498)	(0.669)
Div./Wid.	1.980***	0.789	1.819***	0.928	1.816***	0.916	1.591**	0.880	1.579**	0.884
	(0.380)	(0.328)	(0.357)	(0.388)	(0.357)	(0.382)	(0.323)	(0.383)	(0.321)	(0.385)
Age	1.213***	1.103	1.307***	1.047	1.304***	1.056	1.295***	1.052	1.301***	1.058
	(0.062)	(0.075)	(0.073)	(0.073)	(0.072)	(0.074)	(0.070)	(0.074)	(0.070)	(0.075)
Age^2	0.997***	0.999	0.996***	0.999	0.996***	0.999	0.996***	0.999	0.996***	0.999
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Non-Employed			1.821***	1.124	1.807***	1.137	1.817***	1.140	2.055***	1.545
			(0.229)	(0.254)	(0.227)	(0.258)	(0.226)	(0.259)	(0.317)	(0.558)
Race (Ref Cat: Black)										
White			1.655***	2.552***	1.722***	2.281***	1.752***	2.295***	1.692***	2.326***
			(0.157)	(0.456)	(0.172)	(0.417)	(0.176)	(0.423)	(0.173)	(0.441)
Hispanic			1.408*	2.307**	1.413*	2.336***	1.396*	2.338***	1.321	2.377***
			(0.287)	(0.763)	(0.288)	(0.768)	(0.282)	(0.768)	(0.272)	(0.796)
Education (Ref Cat Less than High School: <12)										
2.Educ. (12)			1.291	2.213	1.333	2.007	1.330	2.009	1.349	2.016
			(0.240)	(1.090)	(0.248)	(0.999)	(0.248)	(1.000)	(0.252)	(1.005)
3.Educ. (13)			0.747*	1.552	0.781	1.372	0.778	1.377	0.775	1.367
			(0.130)	(0.721)	(0.138)	(0.649)	(0.138)	(0.654)	(0.137)	(0.648)
4.Educ. (14)			0.753	3.449***	0.790	3.003**	0.764	3.009**	0.759	2.982**
			(0.141)	(1.594)	(0.149)	(1.415)	(0.145)	(1.425)	(0.144)	(1.412)
5.Educ . (>15)			0.686*	3.919***	0.726	3.277**	0.683*	3.278**	0.682*	3.224**
			(0.133)	(1.816)	(0.143)	(1.553)	(0.135)	(1.569)	(0.135)	(1.544)
Father Self Employed					1.244	1.200	1.247	1.201	1.253	1.195
					(0.280)	(0.341)	(0.281)	(0.341)	(0.282)	(0.338)
Parent's SES Status (Ref. Cat. Poor)										
Average					0.871	1.409*	0.878	1.410*	0.878	1.397*
					(0.088)	(0.270)	(0.088)	(0.270)	(0.088)	(0.268)
Well-Off					0.805**	2.142***	0.810*	2.143***	0.811*	2.128***
					(0.088)	(0.411)	(0.088)	(0.411)	(0.088)	(0.409)
Number of Children							0.994	1.017	0.996	1.020
							(0.040)	(0.064)	(0.040)	(0.065)
Marriage Duration							0.963***	0.994	0.963***	0.993
							(0.011)	(0.016)	(0.011)	(0.016)
Duration in Non-Employment									0.950	0.854
									(0.039)	(0.130)
State Self Employment Rate									7.726	0.211
									(10.483)	(0.455)
Log-Likelihood	-5428.34		-5340.65		-5327.52		-5321.48		-5318.44	
Chi^2	73.39***		232.20***		260.61***		274.65***		282.32***	
BIC	10987.58		10964.91		11004.10		11035.65		11073.20	
N	54616		54616		54616		54616		54616	

Coefficients represent the relative risk ratios (RRR). *: p <0.1, **: p <0.05, ***: p<0.01. Standard errors are clustered at the individual level. Sample is weighted using the individual longitudinal weights 1968.

Table 6. Competing-Risk (Multinomial Logit) Models with Spouse Characteristics for *Women*

	Model 1		Model 2		Model 3	
	Unincorp.	**Incorp.**	**Unincorp.**	**Incorp.**	**Unincorp.**	**Incorp.**
Relationship Status (Reference Category: Never Married)						
Married	1.515***	2.114**	1.641***	2.401*	1.644***	2.406*
	(0.193)	(0.732)	(0.303)	(1.149)	(0.303)	(1.157)
Cohabiting	1.184	1.340	1.300	1.734	1.299	1.717
	(0.345)	(1.023)	(0.403)	(1.336)	(0.403)	(1.330)
Divorced/Widow	1.180	2.084**	1.189	2.162**	1.191	2.153**
	(0.187)	(0.728)	(0.189)	(0.754)	(0.189)	(0.755)
Age	1.540***	2.167***	1.525***	2.100***	1.525***	2.088***
	(0.088)	(0.246)	(0.087)	(0.241)	(0.087)	(0.240)
Age^2	0.994***	0.989***	0.994***	0.990***	0.994***	0.990***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Non-Employed	2.213***	1.711*	2.208***	1.696*	2.216***	1.704*
	(0.257)	(0.482)	(0.256)	(0.475)	(0.258)	(0.480)
Number of Children	1.166***	0.945	1.165***	0.922	1.166***	0.923
	(0.044)	(0.084)	(0.045)	(0.087)	(0.045)	(0.087)
Marriage Duration	0.949***	0.964	0.948***	0.968	0.948***	0.967
	(0.011)	(0.024)	(0.011)	(0.024)	(0.011)	(0.024)
Duration in Non-Employment	0.958***	1.013	0.958***	1.009	0.958***	1.010
	(0.015)	(0.037)	(0.015)	(0.036)	(0.015)	(0.037)
Partner's Employment Status (Ref Category: Employed/ Wage Earner)						
Not Employed			0.644	0.649	0.589*	0.554
			(0.181)	(0.441)	(0.183)	(0.415)
Self Employed			1.560**	3.553***	1.432	2.930**
			(0.329)	(1.596)	(0.334)	(1.482)
Partner's Education (Ref. Cat: Highest Education > 15)						
1. Education (<12)					0.984	0.000***
					(0.276)	(0.000)
2. Education (12)					1.103	1.291
					(0.245)	(0.683)
3. Education (13)					1.110	1.159
					(0.163)	(0.378)
4. Education (14)					1.160	1.713*
					(0.174)	(0.496)
Log likelihood	-4247.99		-4210.25		-4205.48	
Chi2	332.51***		474.03***		8190.93***	
BIC	8935.70		8926.17		9004.56	
N	59440		59440		59440	

Note: All the models include individuals' own education, race and parental background and state self-employment rate as controls. Marriage duration, relationship status and partner variables are lagged one year. Coefficients represent the relative risk ratios (RRR). *: p <0.1, **: p <0.05, ***: p<0.01. Standard errors are clustered at the individual level. Sample is weighted using individual longitudinal weights 1968.

Table 7. Competing-Risk (Multinomial Logit) Models with Spouse Characteristics for *Men*

	Model 1		Model 2		Model 3	
	Unincorp.	**Incorp.**	**Unincorp.**	**Incorp.**	**Unincorp.**	**Incorp.**
Relationship Status (Reference Category: Never Married)						
Married	1.735***	1.646**	2.191***	2.426***	2.195***	2.390***
	(0.239)	(0.353)	(0.397)	(0.730)	(0.397)	(0.720)
Cohabiting	2.616***	1.769	3.229***	2.446**	3.217***	2.469**
	(0.566)	(0.754)	(0.738)	(1.104)	(0.736)	(1.113)
Divorced/Widow	1.756***	0.802	1.780***	0.828	1.770***	0.834
	(0.366)	(0.401)	(0.371)	(0.415)	(0.369)	(0.418)
Age	1.324***	1.032	1.320***	1.018	1.326***	1.016
	(0.075)	(0.077)	(0.075)	(0.076)	(0.075)	(0.076)
Age^2	0.996***	0.999	0.996***	0.999	0.996***	0.999
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Non-Employed	2.069***	0.993	2.034***	0.960	2.021***	0.950
	(0.325)	(0.373)	(0.321)	(0.364)	(0.319)	(0.363)
Number of Children	0.988	1.020	0.966	1.014	0.962	1.014
	(0.041)	(0.067)	(0.041)	(0.069)	(0.041)	(0.069)
Marriage Duration	0.961***	0.999	0.962***	0.998	0.961***	1.001
	(0.011)	(0.018)	(0.012)	(0.018)	(0.011)	(0.018)
Duration in Non-Employment	0.957	0.925	0.956	0.927	0.957	0.925
	(0.039)	(0.124)	(0.039)	(0.125)	(0.039)	(0.126)
Partner's Employment Status (Ref Cat.: Partner Employed/ Wage Earner)						
Not Employed			0.871	0.618*	0.907	0.825
			(0.138)	(0.173)	(0.191)	(0.268)
Self Employed			1.444*	1.363	1.520	1.777
			(0.317)	(0.464)	(0.390)	(0.661)
Partner's Education (Ref. Cat: Highest Education > 15)						
1. Education (<12)					0.835	0.740
					(0.222)	(0.330)
2. Education (12)					1.164	0.638
					(0.232)	(0.210)
3. Education (13)					0.989	0.675**
					(0.154)	(0.131)
4. Education (14)					0.746*	0.801
					(0.126)	(0.158)
Log likelihood	-5005.56		-4986.40		-4980.36	
Chi^2	286.84***		328.04***		341.63***	
BIC	10445.49		10472.32		10547.12	
N	52011		52011		52011	

Note: All the models include individuals' own education, race and parental background and state self- employment rate as controls. Marriage duration, relationship status and partner variables are lagged one year. Coefficients represent the relative risk ratios (RRR). *: p <0.1, **: p <0.05, ***: p<0.01. Standard errors are clustered at the individual level. Sample is weighted using the individual longitudinal weights 1968.

Appendix

Table A.1. Non-Repeated Event, Discreet-Time Duration Models with Individual Fixed Effects for *Women*

	Unincorporated Self Employment			Incorporated Self Employment		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Has a Partner	1.434**			1.830*		
	(0.211)			(0.626)		
Cohabiting		0.442**			1.091	
		(0.147)			(0.898)	
Married			1.647***			1.671
			(0.273)			(0.527)
Age	1.620***	1.600***	1.506***	1.741***	10.934***	1.831***
	(0.098)	(0.273)	(0.118)	(0.282)	(9.283)	(0.271)
Age^2	0.992***	0.994**	0.989***	0.991***	0.967***	0.990***
	(0.001)	(0.003)	(0.001)	(0.003)	(0.012)	(0.002)
Not Employed	1.292**	0.605*	1.378***	0.907	0.044*	1.055
	(0.148)	(0.184)	(0.048)	(0.221)	(0.078)	(0.083)
Num of Children	2.199***	0.884	2.175***	2.292***	0.129**	2.316***
	(0.182)	(0.197)	(0.185)	(0.425)	(0.111)	(0.410)
Duration Not Employed	1.009	1.146**	0.998	1.133**	2.270**	1.050
	(0.023)	(0.074)	(0.028)	(0.070)	(0.848)	(0.087)
Log Likelihood	-1788.64	-256.77	-1699.60	-403.96	-29.18	−399.92
Chi^2	470.51***	33.32***	405.27***	127.49***	30.390***	98.80***
N	4852	794	4527	1094	144	1053

Note: Coefficients are expressed in terms of odds ratios. Relationship status variables are lagged one year.

Table A.2. Non-Repeated Event, Discreet-Time Duration Models with Individual Fixed Effects for *Men*

	Unincorporated Self Employment			Incorporated Self Employment		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Has a Partner	1.494**			3.537***		
	(0.289)			(1.545)		
Cohabiting		1.464			1.275	
		(0.420)			(0.762)	
Marriage			1.467**			2.150**
			(0.271)			(0.693)
Age	3.434***	2.602***	2.867***	5.014***	1.676	3.755***
	(0.261)	(0.528)	(0.205)	(0.652)	(0.701)	(0.415)
Age^2	0.982***	0.988***	0.984***	0.977***	0.996	0.981***
	(0.001)	(0.003)	(0.001)	(0.002)	(0.006)	(0.002)
Not Employed	0.329***	0.435*	0.080***	0.420**	0.467	0.064***
	(0.070)	(0.199)	(0.014)	(0.181)	(0.875)	(0.02)
Num of Children	4.628***	0.655	4.497***	6.112***	0.780	4.116***
	(0.660)	(0.175)	(0.587)	(1.693)	(0.414)	(0.873)
Duration Not Employed	1.066	0.920	1.664***	1.246	2.325	2.196***
	(0.085)	(0.13)	(0.124)	(0.240)	(2.453)	(0.323)
Log Likelihood	-1027.40	-213.06	-1028.21	-363.55	-47.88	-414.62
Chi^2	1685.478***	89.599***	1407.542***	878.542***	20.870***	768.684***
N	4495	826	4158	2073	192	2044

Note: Coefficients are expressed in terms of odds ratios. Relationship status variables are lagged one year

Table A.3. Non-Repeated Event and Discreet-Time Duration Models with Household Fixed-Effects for *Men and Women*

	WOMEN				MEN			
	Unincorporated		**Incorporated**		**Unincorporated**		**Incorporated**	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Partner Self-Employed	2.028***		0.794		2.655***		2.334**	
	(0.458)		(0.349)		(0.802)		(0.916)	
Partner Wage Earner		0.861		1.931		0.773*		0.499***
		(0.118)		(0.994)		(0.106)		(0.107)
Age	1.519***	1.568***	1.354	0.933	2.863***	1.614***	2.705***	1.185*
	(0.209)	(0.106)	(0.384)	(0.313)	(0.550)	(0.096)	(0.684)	(0.115)
Age^2	0.995**	0.993***	0.992*	1.004	0.987***	0.995***	0.987***	0.999
	(0.002)	(0.001)	(0.005)	(0.006)	(0.003)	(0.001)	(0.003)	(0.001)
Not Employed	0.767	1.357***	0.724	1.279	1.101	0.392***	0.607	2.220
	(0.186)	(0.157)	(0.299)	(0.656)	(1.167)	(0.081)	(0.791)	(1.216)
Num of Children	1.716***	1.184**	1.100	1.148	1.153	0.673***	1.116	0.510***
	(0.292)	(0.090)	(0.311)	(0.379)	(0.318)	(0.055)	(0.434)	(0.065)
Duration Not Employed	1.037	0.951**	0.967	1.104	0.721	1.111	1.251	0.567**
	(0.053)	(0.021)	(0.072)	(0.106)	(0.523)	(0.084)	(0.419)	(0.155)
Log Likelihood	-444.100	-1756.991	-167.308	-126.069	-223.609	-1512.488	-132.017	-610.920
Chi^2	157.227***	90.753***	39.820***	43.141***	158.124***	382.692***	59.357***	55.042***
N	1520	4451	511	386	968	3890	473	1478

Note: Coefficients are expressed in terms of odds ratios. Partner variables are lagged one year